

FBEI UPDATES: Costs and Returns

Updates on Farm Business Economic Indicators

Peanut Farm Characteristics, Income, and Production Costs

In this report... ERS continues its economic analysis of production characteristics and costs and returns for major U.S. crop and livestock commodities. These analyses provide a unique perspective across production regions and are based on national surveys of farmers' and ranchers' actual experiences. Policymakers, researchers, and producer organizations will find the analyses particularly useful in understanding producers' costs and returns relationships. This *Update* report provides a first look at peanut farm characteristics, input use, production costs, and their distribution. A later report will more fully explain these and other factors at various levels of disaggregation.

During the winter of 1996, USDA surveyed peanut growers in six major peanut-growing States for the 1995 production year. These farms planted peanuts with the intention of harvesting peanuts for nuts not seed. The sample of farms was expanded to represent 13,497 operations of like type and size, and 88 percent of total 1995 U.S. peanut production.

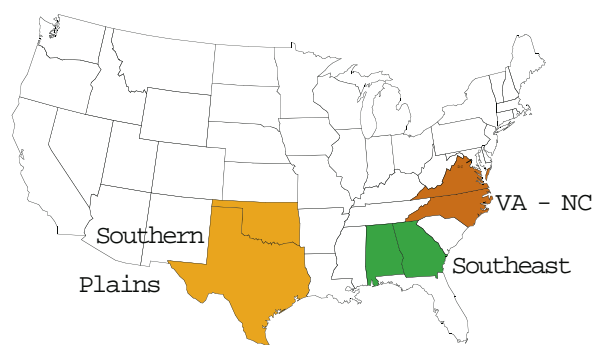
Farm Characteristics

Peanuts are grown in only a few States, but farms, acreage, and production are primarily concentrated in Alabama and Georgia. For this study, three regions were defined based on common cultural practices and enough sample observations to provide statistically reliable estimates (see map). Roughly 66 percent of peanut farms were in the Southeast, 19 percent in the Southern Plains, and 15 percent in Virginia-North Carolina.

Peanuts typically account for only a small percentage of the average farm's acreage. The survey reported an average of 105 peanut acres planted out of an average total acres operated of 713--there was little variation among regions. Peanuts made up about 30 percent of the farms' average total market value of crops and livestock.

U.S. farmers planted peanuts on 1.5 million acres in 1995 and produced 3.5 billion pounds, down 18 percent from 1994. Peanut growers in all three regions had production shortfalls in 1995. Farmers reported average yields of 2,140 pounds per acre, somewhat less than the 3,000 pounds they expected at the beginning of the season. Costs and returns are estimated on a planted-

Peanut Production Regions



acre basis to capture the costs of inputs applied to all the acres they plant. Growers in the Southeast produced about 73 percent of their expected yield, and growers in Virginia-North Carolina produced 76 percent of their expected yield. Growers in the Southern Plains harvested only 64 percent of their expected yield in 1995.

At the U.S. level, just over a third of U.S. peanut acres were owned, while slightly more than half were cash-rented and about 10 percent were share-rented. Land tenure arrangements varied widely among the regions. In both the Southeast and Virginia-North Carolina, more than 60 percent of peanut acres were cash-rented. In the Southern Plains, there was a more even split among the tenure arrangements. Just under one-fourth of peanut acres were share-rented and just over one-third each were owned and cash-rented.

Current agricultural legislation governs both the price and marketing of peanuts. The national poundage quota is estimated annually and announced by the Secretary of Agriculture. Both the national average quota price support rate and the national quota poundage were unchanged from 1994 to 1995 at \$678 per ton and 1.35 million tons. Production in excess of the poundage quota (additional) are supported at a much lower rate. To qualify for the higher quota support rate, a grower must own or rent quota poundage. Only three-fourths of peanuts produced in 1995 were eligible to receive the higher quota support price.

Peanut quota can be owned or rented, and is often rented with land. More than half of U.S. peanut quota was cash-rented. Regionally, this percentage varied from 24 percent in the Southern Plains to 60 and 62 percent in the Southeast and Virginia-North Carolina. About 40 percent of the quota is owned--varying from 23 percent in Virginia-North Carolina to 38 percent in the Southeast to 61 percent in the Southern Plains. Share-rent accounted for 7 percent of quota nationally, and 15 percent in Virginia-North Carolina and the Southern Plains.

About half of all U.S. peanut farms had total farm sales under \$100,000. On a regional basis, however, there was wide variation. In the Southeast, 52 percent of farms had sales under \$100,000, compared with 36 percent in Virginia-North Carolina and 49 percent in the Southern Plains.

Nationally, peanut growers planted an average of 105 acres to peanuts. About 65 percent of the farms averaged less than 100 acres of peanuts and accounted for 23 percent of production. Around 18 percent of farms planted 100-199 acres of peanuts and accounted for about 21 percent of production.

Input Use

Farmers reported an average seeding rate of 92 pounds per acre, including the slight reseeded of some acreage. Seeding rates varied greatly among regions. Southeast growers used 96 pounds of seed per acre, compared with 106 pounds in Virginia-North Carolina, and 75 pounds in the Southern Plains.

Nearly all peanut farmers reported applying fertilizer but application rates of nitrogen, phosphorous, and potassium differed. Farmers in Virginia-North Carolina applied 7 pounds of nitrogen per acre compared with 22 pounds in the Southern Plains. Farmers in the Southeast applied phosphorous at 41 pounds per acre compared with 17 pounds in Virginia-North Carolina. Farmers applied 60 pounds of potassium per acre in the Southeast and Virginia-North Carolina regions compared with 27 pounds in the Southern Plains.

Farmers reported using chemicals, primarily herbicides, about equally across regions. A much smaller percentage of farmers reported using insecticides and fungicides in the Southern Plains than in the other regions.

Three-fourths of peanut farms reported using custom services, primarily in applying fertilizers and chemicals and in harvesting and hauling. Custom fertilizer application varied from 38 percent in the Southern Plains to 58 percent in Virginia-North Carolina to 71 percent in the Southeast.

Farm Income

The income statement for the average farm with peanuts shows net *cash* income of \$45,582. Commodity receipts are primarily from crop sales (\$170,062) with livestock sales of \$16,718. Virginia-North Carolina farms have the highest cash incomes. Net *farm* income averaged \$31,168.

Production Costs and Their Distributions

Cash costs of producing 1995 U.S. peanuts averaged \$414 per planted acre and total economic costs averaged \$633 per acre. Fertilizer, chemical, and seed costs accounted for two-thirds of the variable costs. At the average harvest-month price of 29 cents per pound, 70 percent of peanut growers were able to cover cash costs. When capital replacement costs were included, 62 percent of growers were able to cover costs.

Estimated 1995 variable cash expenses were converted to a per-pound basis and ranked from lowest to highest to form a weighted cumulative distribution of farms and production.

One-fourth of farms had per-pound variable expenses of 13 cents or less (low-cost) and accounted for 40 percent of production. At the other end of the distribution, one-fourth of farms had variable expenses of 27 cents per pound or more (high-cost) but accounted for only 6 percent of production.

High-cost producers can be distinguished from low-cost producers primarily due to peanut yields which were much lower than expected. The high-cost group expected an average yield of 2,582 pounds, but actual yields were only 890 pounds. Since cost groups are ranked based on costs per pound harvested, these low yields raise per-unit costs. High-cost producers also have a debt-to-asset ratio twice that of low-cost producers.

Roughly 42 percent of FCRS peanut farms had variable cash expenses at or below the average variable cash expense of 15.5 cents per pound in 1995. These farms accounted for 64 percent of peanut production. In the previous FCRS survey of peanut farms in 1991, roughly 46 percent of FCRS peanut farms had variable cash expenses at or below the average variable cash expense of 15.2 cents per pound. Those farms accounted for only 56 percent of peanut production.

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Table 1. Input use of peanut production operations, by region and cost group, 1995

Item	Region			Cost group			All FCRS farms
	Southeast	Virginia- North Carolina	Southern Plains	Low- cost	Mid- cost	High- cost	
Number of peanut farms	8,859	2,057	2,581	3,188	6,985	3,324	13,497
Percent of FCRS farms	66	15	19	24	51	25	100
Percent of acreage	57	17	26	29	56	15	100
Percent of production	60	19	21	40	54	6	100
Farm size:							
Operated acres	637	780	920	874	793	388	713
Peanut acres planted	91	114	145	131	113	63	105
Peanut acres harvested	91	113	134	129	112	56	103
Peanut acreage-practices:							
Percent irrigated	25	6	64	41	29	30	32
Percent dryland	75	94	36	59	71	70	68
Peanut yield:							
Actual yield (lbs/acre)	2,267	2,402	1,703	2,926	2,059	890	2,140
Expected yield (lbs/acre)	3,102	3,167	2,680	3,359	2,924	2,582	3,001
Seed rate-all acres (lbs/acre)	96	106	75	92	94	86	92
Fertilizers (percent using):							
Nitrogen	82	45	78	63	73	91	75
Phosphorus	91	49	76	73	80	94	82
Potassium	86	69	70	74	76	95	80
Fertilizer application rate:							
Nitrogen (lbs/acre)	13.67	6.91	22.43	16.42	14.23	14.24	14.87
Phosphorus (lbs/acre)	40.64	17.43	30.76	35.05	34.47	31.44	34.19
Potassium (lbs/acre)	57.98	59.65	27.15	49.44	51.00	48.02	50.10
Chemicals (percent using):							
Herbicides	98	99	95	97	99	97	98
Insect-fungicides	99	97	63	88	93	93	92
Custom operations (percent using):							
Any custom operations	85	61	64	66	77	89	77
Fertilizer application	71	58	38	53	58	82	63
Chemical application	26	7	47	19	29	31	27
Harvesting/hauling	20	8	30	23	14	31	20
Fuel use (gallons/acre):							
Diesel	26.89	22.11	31.44	27.16	27.64	26.36	27.31
Gasoline	2.09	2.21	2.42	1.72	2.49	2.04	2.20
LP gas	2.25	7.80	18.31	2.96	7.40	d	7.41
Labor use:							
Unpaid labor (hrs/acre)	4.64	4.86	6.54	5.54	4.67	6.37	5.18
Peanut acreage-tenure:							
Percent owned	37	23	37	29	40	28	35
Percent cash rented	60	63	38	57	52	60	55
Percent share rented	3	14	25	14	8	12	10
Peanut quota-disposition:							
Percent owned	38	23	61	32	45	34	40
Percent cash rented	60	62	24	59	49	54	53
Percent share rented	2	15	15	9	6	12	7
Peanut marketing:							
Percent marketed as quota	71	86	66	60	81	81	73
Percent marketed as additional	29	14	34	40	19	19	27

d=Insufficient data for disclosure.

Source: 1995 Farm Costs and Returns Survey, Economic Research Service/USDA.

Table 2. Characteristics of peanut farm operations, by region and cost group, 1995

Item	Region			Cost group			All FCRS farms
	Southeast	Virginia- North Carolina	Southern Plains	Low- cost	Mid- cost	High- cost	
Percent of farms							
Farm organization:							
Individual	81	83	85	81	76	96	82
Partnership, corporation, and coop	19	17	15	19	24	4	18
Operator age:							
Under 50	42	45	45	44	45	37	43
50 and older	58	55	55	56	55	63	57
Operator education:							
High school or less	65	54	53	56	51	89	61
College	35	46	47	44	49	11	39
Peanut enterprise size:							
Fewer than 50 acres	51	39	24	31	36	72	44
50-99 acres	20	21	25	22	27	7	21
100-199 acres	14	23	26	19	20	13	18
200 acres or more	15	17	25	28	17	8	17
Sales class:							
Less than \$100,000	52	36	49	38	39	78	49
\$100,000 or more	48	64	51	62	61	22	51
Dollars per farm							
Value of production:							
Peanuts	60,369	81,282	71,589	111,582	68,136	16,574	65,701
Total farm	208,670	315,058	172,071	320,378	233,848	86,018	217,884

Source: 1995 Farm Costs and Returns Survey, Economic Research Service/USDA.

Table 3. Peanut production costs and returns per planted acre, by region and cost group, 1995

Item	Region			Cost group			All FCRS farms
		Virginia-	Southern				
	Southeast	North Carolina	Plains	Low- cost	Mid- cost	High- cost	
Dollars per planted acre							
Cash expenses:							
Seed	75.05	84.25	61.10	72.35	73.94	69.93	72.88
Fertilizer	49.61	53.55	23.94	38.63	42.81	55.50	43.47
Chemicals	112.44	139.24	40.50	91.26	102.80	92.17	97.83
Custom operations	8.69	4.70	10.24	8.39	9.46	4.71	8.44
Fuel, lube, and electricity	26.49	32.17	54.50	31.93	35.11	39.57	34.84
Repairs	26.27	26.89	31.88	27.40	27.83	28.85	27.86
Hired labor	30.15	43.13	28.91	19.45	42.02	18.99	31.97
Commercial drying	16.44	4.21	18.44	17.86	15.02	8.95	14.95
Total, variable cash expenses	345.14	388.14	269.51	307.27	348.99	318.67	332.24
General farm overhead	15.78	24.69	16.27	13.88	20.90	11.08	17.38
Taxes and insurance	20.66	23.11	17.27	22.31	20.49	14.72	20.17
Interest	44.96	29.42	53.54	41.50	43.81	54.11	44.67
Total, fixed cash expenses	81.40	77.22	87.08	77.69	85.20	79.91	82.22
Total, cash expenses	426.54	465.36	356.59	384.96	434.19	398.58	414.46
 Total economic costs	 635.29	 712.73	 576.86	 632.82	 652.97	 555.87	 632.64
Returns:							
Gross value of production	641.30	735.79	492.58	855.97	608.77	278.64	630.97
Returns above cash costs	214.76	270.43	135.99	471.01	174.58	-119.94	216.51
Returns above economic costs	6.01	23.06	-84.28	223.15	-44.20	-277.30	-1.67

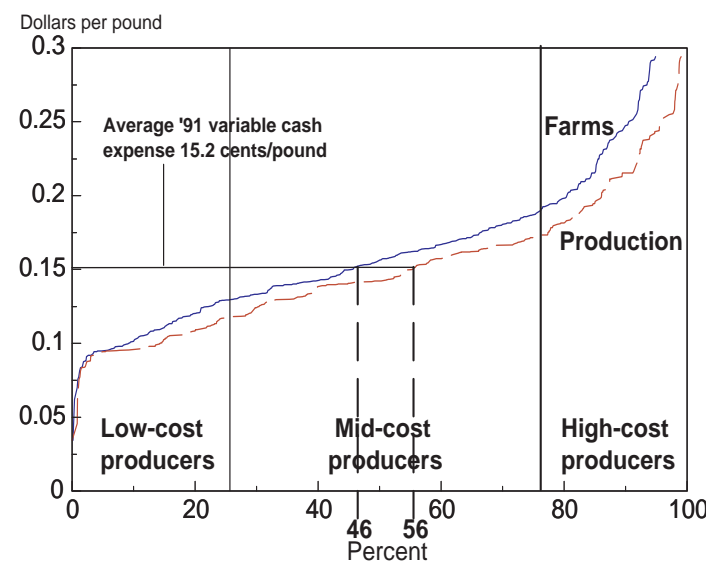
Source: 1995 Farm Costs and Returns Survey, Economic Research Service/USDA.

Table 4. Income and balance sheet statement for average peanut farm, by region and cost group, 1995

Item	Region			Cost group			All FCRS farms
	Southeast	Virginia- North Carolina	Southern Plains	Low- cost	Mid- cost	High- cost	
Number of peanut farms	8,859	2,057	2,581	3,188	6,985	3,324	13,497
Acres operated	637	780	920	874	793	388	713
Dollars per operation							
Gross cash income	210,734	295,947	183,703	308,281	236,289	95,199	218,550
Livestock sales	12,622	10,462	35,763	21,366	18,178	9,190	16,718
Crop sales	167,906	253,679	110,825	249,753	184,332	63,629	170,062
Government payments	2,834	2,788	5,855	4,113	3,408	2,719	3,405
Other farm-related income	27,371	29,018	31,260	33,048	30,371	19,661	28,366
Less: Cash expenses	165,993	231,039	150,630	220,758	189,213	92,987	172,968
Variable	124,108	177,724	116,772	170,159	143,705	66,232	130,876
Livestock purchases	892	228	8,153	1,866	2,018	2,819	2,179
Feed	3,568	3,432	7,766	5,236	5,408	1,277	4,350
Other livestock expenses	410	268	3,306	1,360	860	713	942
Seed and plants	12,623	18,215	13,260	17,632	14,991	6,798	13,597
Fertilizer and chemicals	54,996	78,272	28,132	68,442	58,172	28,967	53,406
Hired labor	16,785	30,314	14,575	25,200	20,657	7,232	18,424
Fuels and oils	8,328	13,084	10,515	10,700	11,378	4,283	9,471
Repairs and maintenance	13,767	17,821	14,226	19,198	15,892	6,957	14,473
Machine hire and custom	6,441	5,183	4,231	7,814	6,250	3,031	5,826
Utilities	2,439	4,653	7,520	6,343	3,369	2,056	3,748
Other variable expenses	3,860	6,256	5,088	6,368	4,712	2,100	4,460
Fixed	41,885	53,315	33,858	50,599	45,507	26,755	42,092
Real estate & property taxes	2,769	3,025	1,983	3,007	3,094	1,406	2,658
Interest	12,893	12,088	16,082	14,448	14,452	10,104	13,380
Insurance	7,730	7,955	6,778	9,552	8,003	4,808	7,582
Rent and lease payments	18,494	30,248	9,014	23,593	19,958	10,437	18,472
Equals: Net cash farm income	44,740	64,907	33,072	87,523	47,076	2,212	45,582
Less:							
Depreciation	15,812	21,293	19,058	22,773	19,466	7,366	17,268
Non-cash labor benefits	499	768	519	887	556	188	544
Plus:							
Inventory adjustment	676	1,769	-5,717	10,296	-5,534	209	-380
Nonmoney income	3,771	4,083	3,555	4,285	3,745	3,358	3,777
Equals: Net farm income	32,877	48,698	11,333	78,443	25,265	-1,774	31,168
Total assets	617,595	629,792	656,266	816,013	694,081	304,104	626,849
Less: Total debt	89,716	83,112	141,710	103,840	106,688	76,789	98,652
Equals: Net worth	527,879	546,680	514,556	712,173	587,393	227,315	528,196
Debt-to-asset ratio	0.13	0.12	0.21	0.12	0.14	0.24	0.15

Source: 1995 Farm Costs and Returns Survey, Economic Research Service/USDA.

Cumulative distribution of peanut variable cash expenses, 1991



Cumulative distribution of peanut variable cash expenses, 1995

